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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|------------------|
| 10/091,239 | 03/05/2002 | Steven Paul Giles | TH-1923 (US) | 7191 |
| 7590 10/23/2003 | | | | |
| Beverlee G. Steinberg Shell Oil Company Intellectual Property P.O. Box 2463 Houston, TX 77252-2463 | | | EXAMINER PHAM, MINH CHAU THI | |
| | | | ART UNIT 1724 | PAPER NUMBER |

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/091,239 | Applicant(s) GILES ET AL. | |
| | Examiner Minh-Chau T. Pham | Art Unit 1724 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the international Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 11 and 16 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Wright (5,547,495; 13, 20, 22 & 36 in Fig. 2; 40 in Fig. 5; col. 2, lines 4-18 and lines 34-41; col. 7, line 23 through col. 8, line 40).

Wright discloses a process for trapping particulate matter in a gas stream comprising the steps of providing one exit for exhaust gas connected to one duct, placing at least one particulate trap in the duct wherein the particulate trap is removable or replaceable while equipment is on line. Wright further discloses the assembly comprising the particulate trap and a sliding gate housing positioned within the duct such that the opening of the sliding gate housing allows particulate trap removal or replacement. Wright also discloses the assembly is upstream of a catalyst bed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a process for trapping particulate matter in a gas stream as taught by Wright so that the particulate trap can be easily removed or replaced for routine maintenance or routine inspection without disrupting the operation of the filtration assembly.

3. Claims 12-15 and 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright (5,547,495; 13, 20, 22 & 36 in Fig. 2; 40 in Fig. 5; col. 2, lines 4-18 and lines 34-41; col. 7, line 23 through col. 8, line 40), in view of Peter et al (6,063,150; 34, 36 & 40 in Fig. 6; Figs. 8-10; col. 1, lines 9-15; col. 5, line 8 through col. 6, line 67).

Claims 12-15 and 17-26 call for a plurality of filtering layers with different mesh sizes. Peter et al disclose a particulate trap for removing particles from a gas stream comprising a plurality of filtering layers with different mesh sizes while one media catches larger particles and one filtering layer catches smaller particles being sandwiched between two larger particles media layers, and the filtering layer is sintered weave material weave material and is pleated. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a plurality filtering layers as taught by Peter et al in the filtration apparatus of Wright since it is well known in the art that multiple filtration layers with different mesh sizes would filter out all different particle sizes thus enhance the filtration efficiency.

Response to Amendment

4. Applicant's arguments filed on September 8, 2003 have been fully considered but they are not persuasive.

Applicant argues that "the Wright patent teaches an assembly that can include a catalytic converter placed upstream of an electrostatic precipitator. The electrostatic precipitator is used to remove particulate matter contained in the flue gas stream. Applicant's claimed invention, on the other hand, includes a particulate trap that is placed in a conduit upstream from a bed of environmental catalyst. The particulate trap provides for the removal of particulate matter from a combustion gas stream prior to contacting it with the environmental catalyst. This is to prevent plugging of the catalyst particles". The Examiner respectfully disagrees and would like to point out to Applicant that the Wright reference does disclose this limitation of a particulate trap placed upstream of the catalyst to remove particulates. Wright suggests "removing a small

portion of the flue gas wherein the flue gas contains fly ash which could inhibit the effectiveness of conventional catalyst material and the stream of flue gas is cleaned by a precipitator. Following cleaning, the stream of filtered gas is then passed across a catalytic converter. (See col. 2, lines 4-18 and lines 34-41).

Applicant's arguments with respect to new claims 11-26 have been thoroughly considered but are moot in view of the rejections as discussed above.

Art Unit: 1724

5. Applicant's amendment necessitated the new grounds of rejection. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau Pham whose telephone number is (703) 308-1605.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Applicant's response may be mailed or faxed. However, note that some correspondence may not be faxed, i.e. certain correspondence requiring an original signature and certain drawing changes (see MPEP 502.01). The fax number for Technology Center 1700 for After Final communications is (703) 872-9311. If the response is faxed, a duplicate mailed copy of the facsimile transmission is not required and will only serve to delay processing of your application.



Minh-Chau Pham

Patent Examiner

Art Unit: 1724